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(54) **Roadway luminaire and methods of use**

(57) A lighting apparatus having a base member and a directional member are shown and described. The base member includes a first surface having a plurality of reflective elements extending therefrom. The base member also including a plurality of openings arranged in a pattern. Each openings is configured to receive a respective light source. The directional member has a portion of a reflective surface positioned relative to at least one opening to reflect light radiating from a lighting source disposed within the opening towards a portion of at least one of the reflective elements extending from the base member.

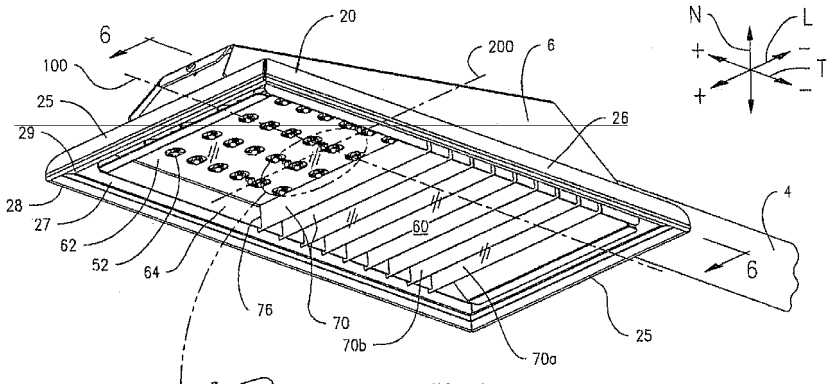


FIG. 4

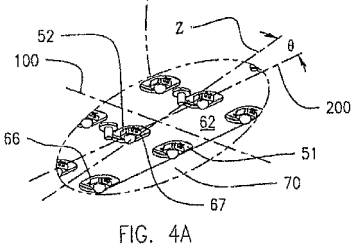


FIG. 4A

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EUROPEAN SEARCH REPORT

Application Number
EP 08 16 6681

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X Y	US 2004/188593 A1 (MULLINS PATRICK [US] ET AL) 30 September 2004 (2004-09-30) * paragraphs [0032] - [0033]; figure 2 *	1-3,6-12 4,5, 13-23	INV. F21S8/00 F21S8/08 F21V11/16
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The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	27 November 2012	Berthommé, Emmanuel

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
Y : particularly relevant if combined with another document of the same category
A : technological background
O : non-written disclosure
P : intermediate document

T : theory or principle underlying the invention
E : earlier patent document, but published on, or after the filing date
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L : document cited for other reasons

& : member of the same patent family, corresponding document

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CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing claims for which payment was due.

☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due and for those claims for which claims fees have been paid, namely claim(s):

☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due.

LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

☒ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.

☐ As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.

☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:

☐ None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:

☐ The present supplementary European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims (Rule 164 (1) EPC).

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LACK OF UNITY OF INVENTION
SHEET B

Application Number
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The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. claims: 1-3, 6-12

Lighting apparatus comprising a column of LED and an adjacent reflector.

1.1. claims: 8, 12

Lighting apparatus having a plurality of LEDs and an adjacent reflector with one or more LEDs without adjacent reflector.

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2. claims: 4, 5, 13-23

Lighting apparatus having a base with reflective elements and with openings for LEDs and a "directional member" with a reflective surface.

Please note that all inventions mentioned under item 1, although not necessarily linked by a common inventive concept, could be searched without effort justifying an additional fee.

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 08 16 6681

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
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27-11-2012

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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82